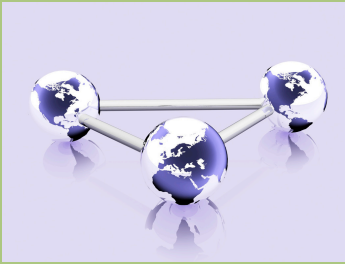


Designing Principles and Considerations for Technology-based Learning Environments



Valeria Palladino

Distributed Learning Symposium, Calgary - March 12, 2009

Considerations and presentation notes...

“Imagination is more important than knowledge”, Albert Einstein

A handout of thoughts, notes, ideas and comments from the presenter to accompany our learning conversation. Wishing you all an inspirational journey!



Since we must begin somewhere, how about agreeing on some common and fundamental principles and direction that the Education Ministry can agree

on? How about the following:

Learning in the 21st Century will:

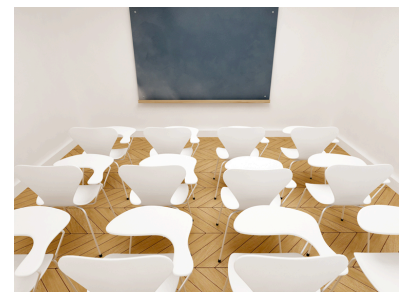
- consider the whole person
- embrace emerging technologies
- embed interdisciplinary principles
- have a global scope
- embrace transitions

All of these principles can be viewed on the basis of the curricular guidelines (Outcomes).

“Successful curriculum materials depend on a process of iterative refinement to respond to the complex systems that impact classroom learning”

Some basic suggested terminology:

- **Feature** = any effort to use technology to advance learning
- **Learning environment** = a system that incorporates features and a navigation system
- **Design principle** = abstractions that connect features



I Collaborative Knowledge Building Using the Design Principle Database, Yael Kali, p.188, 2006

Learning Environments

In designing learning environments we can embrace the idea that : “...*problem solving is the most meaningful goal state of learning.*”

What if...



...problem solving was the true learning goal of all learning environments? Digital and traditional?

ANALOGICAL AND CAUSAL REASONING ...

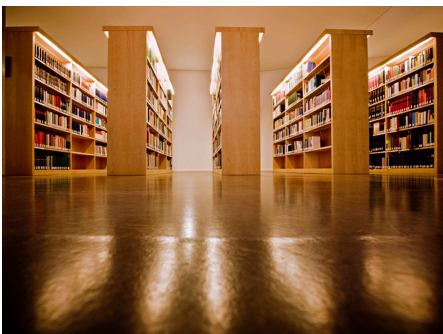
Students should always engage in authentic, open-ended realistic problems as a context for learning ideas and skills. E-learning environments bring many advantages to this fundamental need.

Designing challenges for the end of the journey



- select the goal (a process or a product)
- select meaningful, compelling and contextually relevant task
- use models and embrace designing principles that make sense
- offer and demonstrate added value to the current educational make up
- gain the trust of the user

Designing challenges while planning



- identify and remain true to the user
- provide choice, flexibility, relevance and authenticity
- pay attention to re-usability and adaptation opportunities
- consider and address sustainability issues

“The first online course one attends properly is the second course one participates in” (Blog entry comment)

I A Taxonomy of Meaningful learning, D. H. Jonassen, Educational Technology, September-October 2007

Useful Readings

- Usability of Websites for Children: 70 Design Guidelines, S. Gilutz and J. Nielsen, April 2002
- Teenagers on the Web: Usability Guidelines for Creating Compelling Websites for Teens, H. Loranger and J. Nielsen
- Misconceptions Reconcieved: A Constructivist Analysis of KNowledge in Transition, J. P. Smith, III, A. A. diSessa, J. Roshelle, The Journal of Learning Sciences, 1993.

Presentation Key Messages

All about the story



Why seek seek and understand your audience?

How to go about it?

The ADDIE model

What difference does it make?

The journey



One or many?

Consider learning objects and their fundamental standing principles. Will they serve your purposes better as smaller units or as integral part of bigger environments?

The Processes

Fundamental decisions on how to arrive to the destination, must be made at critical points during the designing process. make the systems work for you and not you work for the system.

The team



Where to find them?

Degrees of commitment

Keep them happy!
